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| APPLICATION NO.   | FILED DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|------------|----------------------|---------------------|------------------|
| 10/659,788  | 09/10/2003 | John Geoffrey Chan   | 9041M               | 5575             |
| 27752   | 7590       | 03/24/2005           | EXAMINER            |                  |
| THE PROCTER & GAMBLE COMPANY<br>INTELLECTUAL PROPERTY DIVISION<br>WINTON HILL TECHNICAL CENTER - BOX 161<br>6110 CENTER HILL AVENUE<br>CINCINNATI, OH 45224 |            |                      | COLE, LAURA C       |                  |
|   |            |                      | ART UNIT            | PAPER NUMBER     |
|   |            |                      | 1744                |                  |
| DATE MAILED: 03/24/2005   |            |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                 |                         |  |
|------------------------------|---------------------------------|-------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b>          | <b>Applicant(s)</b>     |  |
|                              | 10/659,788                      | CHAN, JOHN GEOFFREY     |  |
|                              | <b>Examiner</b><br>Laura C Cole | <b>Art Unit</b><br>1744 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 01 February 2005.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-23 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-23 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 08 March 2004 is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | Paper No(s)/Mail Date. _____.   |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12162004</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|   | 6) <input type="checkbox"/> Other: _____.                                   |

## DETAILED ACTION

### ***Information Disclosure Statement***

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. **Specifically, the Examiner was unable to consider one document made reference to in the specification on Page 8 Line 25, WO 01/29128.**

References in the Information Disclosure Statement of 16 December 2004 that have lines struck through them are references that have been cited previously on the form PTO-892 or are duplicate citations within the Information Disclosure Statement.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 7-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In Claims 7-8, 11, and 16 it is unclear as to what is meant by "sufficient engagement." Is "sufficient engagement" the point at which the engagement member of the housing and the annular engagement surface of the brush head are securely

attached or is it defined as when the first and second threads cannot be rotated any further in respect to each other? If it is the latter, then it appears that there are at least four revolutions of the first and second threads in Figures 7A-7C so in that case would "fully engage" go above and beyond the claimed 540 degrees?

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –  
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 7-8, 22, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 198 05 770 A1 (see also English translation of this document).

DE 198 05 770 discloses the claimed invention including a housing defining a hollow interior (see particularly Figures 26, 45, 48) having a motor (68 or 99 or 122), and a first shaft disposed therein (extending from the motor and unlabeled, see Figures 26 or 45), the housing having an engagement member extending along a longitudinal axis including a first thread helically extending from the engagement member (71 or 100; Page 10 last paragraph, Page 12 fourth paragraph), and a brush head (55 or 91) having a moving bristle carrier at a first end of the brush head (60, 61 or unlabeled bristle carriers in Figure 45) and a second shaft operatively connected to the movable bristle carrier (64 or 101), the brush head having a receiving region at a second end of the brush head opposite a first end that has a helical thread along the engagement surface (65), wherein the first thread and second thread form a threaded connection

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that releaseably couples the brush head to the handle (Page 10 last paragraph, Page 12 fourth paragraph). One of the handle and brush head are capable of being rotated between about 270 and 450 degrees to sufficiently engage the first and second thread (see the number of threads in the Figures, one would be capable of rotating either the brush head or handle between 270 and 450 degrees). The engagement member protrudes from the housing (see particularly Figures 26, 45, and 48) wherein the receiving region receives the entire engagement member (see Figures).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE 198 05 770 A1 (see also English translation of this document).

DE 198 05 770 A1 discloses all elements above in paragraph 3, however does not disclose that the threads have a pitch between about 2mm and 3mm. DE 198 05

770 A1 does disclose threads (Page 10 last paragraph, Page 12 fourth paragraph) that inherently have a quantity of pitch. It would have been obvious for one of ordinary skill in the art to have the threads have a pitch of about 2mm and 3mm since the threads of DE 198 05 770 A1 would be expected to perform in such a manner to secure an engagement member to an engagement surface. Also, "where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device." Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984). See also MPEP 2144.04 (IV) A.

5. Claims 1, 3-9, 11, 13-17, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kressner, USPN 5,289,604 in view of DE 198 05 770 A1 (see also English translation of this document).

Kressner discloses the claimed invention including a housing (22) defining a hollow interior (18; Column 4 Lines 38-45) having a motor (28) and a first shaft disposed therein that is operatively connected to the motor (23), the housing having an engagement member extending along a longitudinal axis of the housing from an end thereof (27 and 68; Column 5 Lines 31-36), a brush head (24) having a movable bristle carrier at a first end (38) and a second shaft (34) operatively connected to the movable brush carrier (Column 4 Lines 21-23), the brush head having a receiving region at a second end of the brush head opposite the first end (69), the receiving region having an

engagement surface, wherein the engagement member and engagement surface releaseably couples the brush head to the handle when one of the handle or head is connected (Abstract.) The first and second shafts are able to reciprocate (Column 4 Lines 7-12). The second shaft (34) is deflectable (Column 6 Lines 63-66). The second shaft has a tab (52) and the first shaft has a notch (54) that engages the tab to couple the first and second shafts (Column 5 Lines 50-62). The second shaft has an arm (5) wherein the tab (52) is disposed on that arm (see Figure 6C). The "circlip" (62) acts to radially bias the second shaft (Column 4 Line 63 to Column 5 Line 3). The engagement member protrudes from the housing and the receiving region receives the entire engagement member (see Figure 2). Kressner does not disclose that the engagement member includes a first thread helically extending about an engagement member or an engagement surface with a second thread helically extending along the annular engagement surface. Also, Kressner does not include that the first shaft has a cylindrically-shaped tip.

DE 198 05 770 discloses all elements above in paragraph 3, including a connection that releaseably couples the brush head to the handle, a first drive shaft to a second drive shaft, the couple formed by an engagement member having a first thread helically extending about the engagement member and an annular engagement surface having a second thread helically extending around the annular engagement surface. Further, one of either the brush head or handle must inherently be rotated between about 180 degrees and 540 degrees, specifically 270 degrees to 450 degrees to *fully engage* the first thread and second thread because in order for the first and second

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thread to be fully engaged it must rotate one revolution or 360 degrees. DE 198 05 770 shows multiple threads (as does the Applicant in Applicant's figures 7A-7C) so in order for the threads to be fully engaged (to prevent separation of the engagement member from the annular engagement surface), one must rotate either the brush head or handle 360 degrees so that the threaded surfaces are fully engaged.

It would have been obvious for one of ordinary skill in the art to substitute the engagement member and engagement surface of Kressner for one having first and second helically extending threads located thereon, as DE 198 05 770 teaches, as a means to detachably and securely connect a handle having a first shaft with a brush head having a second shaft. Also, it would have been obvious for one of ordinary skill in the art to modify the first shaft to have a cylindrically shaped tip since the Applicant has not disclose that a cylindrically-shaped tip is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art furthermore would have expected the Applicant's invention to perform equally well with the semi-cylindrically shaped tip of Kressner because they both serve to transmit torque of the first shaft to the second shaft.

6. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kressner, USPN 5,289,604 in view of DE 198 05 770 A1 (see also English translation of this document).

Kressner and DE 198 05 770 disclose all elements above in paragraphs 3 and 5, however do not disclose that the threads have a pitch between about 2mm and 3mm. DE 198 05 770 does disclose threads that inherently have a quantity of pitch. It would

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have been obvious for one of ordinary skill in the art to have the threads have a pitch of about 2mm and 3mm since the threads of DE 198 05 770 would be expected to perform in such a manner to secure an engagement member to an engagement surface. Also, "where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device." Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984). See also MPEP 2144.04 (IV) A.

7. Claims 1, 3-11, and 13-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blaustein et al., USPN 6,836,917 in view of DE 198 05 770 A1 (see also English translation of this document).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art only under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 103(a) might be overcome by: (1) a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not an invention "by another"; (2) a showing of a date of invention for the claimed subject matter of the application which corresponds to subject matter disclosed but not claimed in the reference, prior to the effective U.S. filing date of the reference under 37 CFR 1.131; or (3) an oath or declaration under 37 CFR 1.130 stating that the application and reference are currently owned by the same party and that the inventor named in the

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application is the prior inventor under 35 U.S.C. 104, together with a terminal disclaimer in accordance with 37 CFR 1.321(c). For applications filed on or after November 29, 1999, this rejection might also be overcome by showing that the subject matter of the reference and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person. See MPEP § 706.02(I)(1) and § 706.02(I)(2).

Blaustein et al. disclose the claimed invention including an electric toothbrush comprising a housing defining a hollow interior (23, 25; Figure 6) having a motor (52) and a first shaft (100) disposed therein that is operatively connected to the motor (configuration shown in Figure 6), the housing having an engagement member extending along a longitudinal axis of the housing from an end thereof (40), a brush head having a movable bristle carrier at a first end (34) and a second shaft operatively connected to the movable bristle carrier (110; see configuration in Figure 5), the brush head having a receiving region with an engagement surface (32), wherein the first engagement surface and second engagement surface have a connection (36, 44) for releasably coupling the brush head to handle when one of the handle or brush head is rotated about a longitudinal axis. The first and second shafts reciprocate (Column 2 Lines 13-17). The second shaft is deflectable (Column 6 Lines 53-57). The first shaft has a cylindrically-shaped tip (104). The second shaft has a tab (118) and a first shaft has a notch (106) that engages the tab to couple the first and second shaft (see Figures 7A-7C). There is an arm (115) attached to the second shaft (see Figures 7A-7C), the handle has an annular gap between an outer surface of the first shaft and an inner

surface of the handle for receiving the tab and at least a portion of the arm wherein the annular gap extends about the entire perimeter of the first shaft (unlabeled, see Figures 7A-7C). The second shaft is radially biased by a spring (158). The engagement member protrudes from the housing (see Figure 4A). The receiving region receives the entire engagement member (see Figures 4A-4B). Blaustein et al. does not disclose that the engagement member includes a first thread helically extending about an engagement member or an engagement surface with a second thread helically extending along the annular engagement surface.

DE 198 05 770 discloses all elements above in paragraph 3, including a connection that releaseably couples the brush head to the handle, a first drive shaft to a second drive shaft, the couple formed by an engagement member having a first thread helically extending about the engagement member and an annular engagement surface having a second thread helically extending around the annular engagement surface. Further, one of either the brush head or handle must inherently be rotated between about 180 degrees and 540 degrees, specifically 270 degrees to 450 degrees to *fully engage* the first thread and second thread because in order for the first and second thread to be fully engaged it must rotate one revolution or 360 degrees. DE 198 05 770 shows multiple threads (as does the Applicant in Applicant's figures 7A-7C) so in order for the threads to be fully engaged (to prevent separation of the engagement member from the annular engagement surface), one must rotate either the brush head or handle 360 degrees so that the threaded surfaces are fully engaged.

It would have been obvious for one of ordinary skill in the art to substitute the engagement member and engagement surface of Blaustein et al. for one having first and second helically extending threads located thereon, as DE 198 05 770 teaches, as a means to detachably and securely connect a handle having a first shaft with a brush head having a second shaft.

8. Claims 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blaustein et al., USPN 6,836,917 in view of DE 198 05 770 A1 (see also English translation of this document).

Blaustein et al. and DE 198 05 770 disclose all elements above in paragraphs 3 and 7, however do not disclose that the threads have a pitch between about 2mm and 3mm. DE 198 05 770 does disclose threads that inherently have a quantity of pitch. It would have been obvious for one of ordinary skill in the art to have the threads have a pitch of about 2mm and 3mm since the threads of DE 198 05 770 would be expected to perform in such a manner to secure an engagement member to an engagement surface. Also, "where the only difference between the prior art and the claims was a recitation of relative dimensions of the claimed device and a device having the claimed relative dimensions would not perform differently than the prior art device, the claimed device was not patentably distinct from the prior art device." Gardner v. TEC Systems, Inc., 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984). See also MPEP 2144.04 (IV) A.

### ***Applicants Arguments***

9. In the response of 01 February 2005, the Applicant contends that:

Rogers fails to disclose a "first thread and second thread form a threaded connection that releasably couples said brush head to said handle when one of said handle or said brush head is rotated about said longitudinal axis." Rogers includes a "bayonet slot" (12) to detachably connect a handle and brush head. Since Rogers does not include the above, it would not have been obvious to make the combination of Kressner in view of Rogers.

***Response to Arguments***

10. Applicant's arguments, filed 01 February 2005, with respect to the rejection(s) of claim(s) under Rogers have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of DE 198 05 770 A1 and Blaustein et al., USPN 6,836,917.

***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Laura C Cole whose telephone number is (571) 272-1272. The examiner can normally be reached on Monday-Thursday, 7:30am - 5pm, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on (571) 272-1142. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LCC  
LCC  
15 March 2005

*John Kim*  
JOHN KIM  
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